

d his

(FILE 'HOME' ENTERED AT 14:49:45 ON 28 MAY 2003)

FILE 'EUROPATFULL, PATDPAFULL, PCTFULL, RDISCLOSURE, USPATFULL, USPAT2, WPIDS' ENTERED AT 14:49:59 ON 28 MAY 2003

L1 348567 S FISH(3A)OIL OR SALMON OR MARINE OR EICOSAPENT?(W)ACID OR  
FATT  
L2 393 S L1(S)SWINE  
L3 4 S L1(S) (FEMALE(3A)SWINE)

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 15:02:39 ON 28 MAY 2003

L4 15 S L3  
L5 13 S L4 NOT PY>=2000

FILE 'CAPLUS' ENTERED AT 15:06:42 ON 28 MAY 2003

L6 3 S L3

FILE 'EUROPATFULL, PATDPAFULL, PCTFULL, RDISCLOSURE, USPATFULL, USPAT2, WPIDS' ENTERED AT 15:29:41 ON 28 MAY 2003

L7 348828 S FISH(3A)OIL OR SALMON OR MARINE OR EICOSAPENT?(W)ACID OR  
FATT  
L8 16 S L7(S) (FEMALE(3A) (SWINE OR PIG#))  
L9 2 S L8 NOT PY>=2000

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 15:34:09 ON 28 MAY 2003

L10 82 S L9

(P lt 0.05), Safflower oil-diet (P lt 0.05) or Perilla oil-diet (P lt 0.01). Furthermore, both the mean number and the proportion of embryos showing normal morphology in gilts given Mold dried cell-diet were significantly higher than in gilts given the control diet, Safflower oil-diet or Perilla oil-diet. These results indicate that the unsaturated **fatty acids**-enriched mold dried cell may be beneficial for improving ovulation rate and embryo quality.

L10 ANSWER 69 OF 82 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
ACCESSION NUMBER: 1988:421024 BIOSIS  
DOCUMENT NUMBER: BA86:83636  
TITLE: TRANS FATTY ACIDS 1. GROWTH FERTILITY ORGAN WEIGHTS AND NERVE HISTOLOGY AND CONDUCTION VELOCITY IN SOWS AND OFFSPRING.  
AUTHOR(S): OPSTVEDT J; PETTERSEN J; MORK S J  
CORPORATE SOURCE: NORWEGIAN HERRING OIL MEAL RES. INST., N-5033 FYLLINGSDALEN, BERGEN, NORWAY.  
SOURCE: LIPIDS, (1988) 23 (7), 713-719.  
CODEN: LPDSAP. ISSN: 0024-4201.  
FILE SEGMENT: BA; OLD  
LANGUAGE: English

AB Effects of dietary trans **fatty acids** on the pre- and postnatal growth and development in pigs were studied with special emphasis on nervous tissue. In experiment 1, **female pigs** were fed partially hydrogenated **fish oil** (PHFO) (28% trans) or soybean oil (PHSBO) (36% trans), in comparison with lard (0% trans) from weaning (3 wk) through the first reproduction cycle (up to 2 yr). In experiment 2, **female pigs** were fed two **fish oils** (33 and 19% trans) in comparison with coconut oil (0% trans) in diets with low and high levels of linoleic. . .

PHSBO in Expt. 1, but no similar effects were seen in Expt. 2. It is concluded that consumption of trans **fatty acids** with 18-22 carbon atoms from PHFO and with 18 carbon atoms from PHSBO at levels that were 5 to 12 times higher than those normally consumed by humans had no detrimental effects on **female pigs** or their offspring during pregnancy and lactation.

AB Effects of dietary trans **fatty acids** on the pre- and postnatal growth and development in pigs were studied with special emphasis on nervous tissue. In experiment 1, **female pigs** were fed partially hydrogenated **fish oil** (PHFO) (28% trans) or soybean oil (PHSBO) (36% trans), in comparison with lard (0% trans) from weaning (3 wk) through the first reproduction cycle (up to 2 yr). In experiment 2, **female pigs** were fed two **fish oils** (33 and 19% trans) in comparison with coconut oil (0% trans) in diets with low and high levels of linoleic acid

(18.2n-6 cis, cis) from gestation until their offspring were three wk old.

Compared with the trans-free fats, the trans-containing fats had no effect on growth and development, feed consumption and utilization or on the weight of the brain, heart, kidneys, liver, lungs or spleen in the adult sows and

their offspring. No effects from the experimental fats were found on histology and conduction velocity of the peroneal nerve. An increased number of the sows fed PHFO had fertility problems compared with those fed lard and PHSBO in Expt. 1, but no similar effects were seen in Expt. 2. It is concluded that consumption of trans **fatty acids** with 18-22 carbon atoms from PHFO and with 18 carbon atoms from PHSBO at levels that were 5 to 12 times higher than those normally consumed by

humans had no detrimental effects on female pigs or their offspring during pregnancy and lactation.

L10 ANSWER 45 OF 82 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 ACCESSION NUMBER: 1997:385088 BIOSIS  
 DOCUMENT NUMBER: PREV199799684291  
 TITLE: Effect of dietary lard on performance, **fatty acid** composition and susceptibility to lipid peroxidation in growing-finishing **female** and entire male **pigs**.  
 AUTHOR(S): Lopez-Bote, C. J. (1); Sanz, M. (1); Isabel, B. (1); De Ayala, P. Perez; Flores, A.  
 CORPORATE SOURCE: (1) Dep. de Produccion Animal, Fac. de Veterinaria, Univ. Complutense, 28040 Madrid Spain  
 SOURCE: Canadian Journal of Animal Science, (1997) Vol. 77, No. 2, pp. 301-306.  
 ISSN: 0008-3984.  
 DOCUMENT TYPE: Article  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English; French  
 TI Effect of dietary lard on performance, **fatty acid** composition and susceptibility to lipid peroxidation in growing-finishing **female** and entire male **pigs**.  
 AB. . . and meat composition and lipid susceptibility to peroxidation was studied. A total of 720 Landrace times Large White male and **female pigs** (equal number of entire males and females) were used. Experimental diets were formulated to have a low (3000 kcal ME. . . lt 0.01). Carcass backfat and lean percentage were not affected by dietary treatment. A reduction in the proportion of (n-3) **fatty acids** in phospholipids (P lt 0.03), a higher (n-6):(n-3) ratio (P lt 0.01) and a lower susceptibility of muscle homogenates to. . .  
 AB The effect of increasing the energy concentration of growing-finishing pig diets through inclusion of lard on performance, carcass and meat composition and lipid susceptibility to peroxidation was studied. A total of 720 Landrace times Large White male and **female pigs** (equal number of entire males and females) were used. Experimental diets were formulated to have a low (3000 kcal ME kg-1) or high (3200 kcal ME kg-1) energy level, but in all cases to have a constant lysine:ME ratio. This was achieved using a low (6.8 g kg-1) and a high (49.3 g kg-1) level of dietary lard inclusion. Gilts had lower daily gain (P lt 0.0001) and worse feed conversion efficiency (P lt 0.0001) than entire males. Susceptibility to oxidation was not affected by sex. Fat concentration in pig diets equilibrated in metabolizable energy and protein did not modify average gain, but reduced feed intake (P lt 0.02), improved the gain:feed ratio (P lt 0.0001), increased dressing percentage (P lt 0.02) and produced higher carcass weight (P lt 0.01). Carcass backfat and lean percentage were not affected by dietary treatment. A reduction in the proportion of (n-3) **fatty acids** in phospholipids (P lt 0.03), a higher (n-6):(n-3) ratio (P lt 0.01) and a lower susceptibility of muscle homogenates to oxidation was found in animals receiving higher levels of dietary lard (P lt 0.01).

L10 ANSWER 46 OF 82 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 ACCESSION NUMBER: 1997:385058 BIOSIS  
 DOCUMENT NUMBER: PREV199799684261  
 TITLE: Dietary administration of **fatty acids** -enriched mold dried cell containing gamma-linolenic acid to **female pigs** improves ovulation rate and embryo quality in summer.  
 AUTHOR(S): Kojima, Toshiyuki (1); Zeniya, Yumie; Aoyama, Tomoya; Kondo, Akihiro; Yoshino, Junryo  
 CORPORATE SOURCE: (1) Natl. Livestock Breeding Cent., Odakurahara-1, Nishigo,

SOURCE: Nishishirakawa, Fukushima 961 Japan  
Journal of Reproduction and Development, (1997) Vol. 43,  
No. 2, pp. 121-127.  
ISSN: 0916-8818.

DOCUMENT TYPE: Article

LANGUAGE: English

TI Dietary administration of **fatty acids**-enriched mold  
dried cell containing gamma-linolenic acid to **female**  
**pigs** improves ovulation rate and embryo quality in summer.

AB The effect of dietary administration with essential unsaturated  
**fatty acids**, linoleic acid (18:2 (n-6)), a mixture of  
oleic acid (18:1 (n-9)), linoleic acid and gamma-linolenic acid (18:3  
(n-6)), or alpha-linolenic acid (18:3 (n-3)), on early embryo development  
of pubertal **female pigs** in summer was examined.  
Safflower oil was supplemented to a concentrated diet (the control diet)  
at the rate of 5% (Safflower oil-diet). The concentration of linoleic  
acid was 3.75 g/100 g in the Safflower oil-diet. **Fatty acids**  
-enriched mold dried cell was supplemented to the control diet at the  
rate of 20% (Mold dried cell-diet). The concentration of . . . of estrus)  
and assessed morphologically. Embryo collection was repeated twice for each  
pig fed the diet supplemented with essential unsaturated **fatty**  
**acids**. The mean number of corpora lutea was greater in gilts given  
Mold dried cell-diet than in gilts given Safflower oil-diet. . .  
significantly higher than in gilts given the control diet, Safflower  
oil-diet or Perilla oil-diet. These results indicate that the unsaturated  
**fatty acids**-enriched mold dried cell may be beneficial  
for improving ovulation rate and embryo quality.

AB The effect of dietary administration with essential unsaturated  
**fatty acids**, linoleic acid (18:2 (n-6)), a mixture of  
oleic acid (18:1 (n-9)), linoleic acid and gamma-linolenic acid (18:3  
(n-6)), or alpha-linolenic acid (18:3 (n-3)), on early embryo development  
of pubertal **female pigs** in summer was examined.  
Safflower oil was supplemented to a concentrated diet (the control diet)  
at the rate of 5% (Safflower oil-diet). The concentration of linoleic  
acid was 3.75 g/100 g in the Safflower oil-diet. **Fatty acids**  
-enriched mold dried cell was supplemented to the control diet at the  
rate of 20% (Mold dried cell-diet). The concentration of gamma-linolenic acid  
was 5.32 g/100 g in the Mold dried cell-diet. Mold dried cell also  
contains oleic acid and linoleic acid at concentrations of 7.28 g/100 g  
and 2.98 g/100 g, respectively. Perilla oil was supplemented to the  
control diet at the rate of 7.5% (Perilla oil-diet). The concentration of  
alpha-linolenic acid was 4.125 g/100 g in the Perilla oil-diet. Each diet  
was given daily to five crossbred pubertal gilts for approximately 4  
months. From at least 70 days after the start of the experimental diets,  
embryo collections were performed. The control embryos were obtained from  
the same breed, 10 pubertal gilts, given only the control diet. Embryos  
were collected on day 6 (day 1 = the last day of estrus) and assessed  
morphologically. Embryo collection was repeated twice for each pig fed  
the diet supplemented with essential unsaturated **fatty acids**  
. The mean number of corpora lutea was greater in gilts given Mold dried  
cell-diet than in gilts given Safflower oil-diet (P lt 0.05) or Perilla  
oil-diet (P lt 0.01). The mean number of ova recovered in gilts given  
Mold dried cell-diet was also greater than that in gilts given the control  
diet

L3 ANSWER 4 OF 4 WPIDS (C) 2003 THOMSON DERWENT  
 ACCESSION NUMBER: 2002-106245 [14] WPIDS  
 DOC. NO. CPI: C2002-032625  
 TITLE: Swine feed composition for increasing reproductive  
 performance of breeding populations of swine, comprises  
 animal feed blend and marine animal products.  
 DERWENT CLASS: C03 D13  
 INVENTOR(S): HALL, D D; MOSER, R L; ORR, D E; WEBEL, D M; WILSON, M E  
 PATENT ASSIGNEE(S): (UNFE-N) UNITED FEEDS INC; (HALL-I) HALL D D; (MOSE-I)  
 MOSER R L; (ORRD-I) ORR D E; (WEBE-I) WEBEL D M;  
 (WILS-I) WILSON M E  
 COUNTRY COUNT: 97  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001091575	A1	20011206	(200214)*	EN	39
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
AU 2001065273	A	20011211	(200225)		
US 2002051844	A1	20020502	(200234)		
EP 1294236	A1	20030326	(200323)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
US 2003072787	A1	20030417	(200329)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001091575	A1	WO 2001-US17663	20010531
AU 2001065273	A	AU 2001-65273	20010531
US 2002051844	A1 Provisional	US 2000-208616P	20000601
		US 2001-870899	20010531
EP 1294236	A1	EP 2001-939793	20010531
		WO 2001-US17663	20010531
US 2003072787	A1 Provisional	US 2000-208616P	20000601
	Div ex	US 2001-870899	20010531
		US 2002-142685	20020510

=> d his

(FILE 'HOME' ENTERED AT 14:49:45 ON 28 MAY 2003)

FILE 'EUROPATFULL, PATDPAFULL, PCTFULL, RDISCLOSURE, USPATFULL, USPAT2, WPIDS' ENTERED AT 14:49:59 ON 28 MAY 2003

L1 348567 S FISH(3A)OIL OR SALMON OR MARINE OR EICOSAPENT?(W)ACID OR  
FATT  
L2 393 S L1(S)SWINE  
L3 4 S L1(S) (FEMALE(3A)SWINE)

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 15:02:39 ON 28 MAY 2003

L4 15 S L3  
L5 13 S L4 NOT PY>=2000

FILE 'CAPLUS' ENTERED AT 15:06:42 ON 28 MAY 2003

L6 3 S L3

L3 ANSWER 3 OF 4 USPATFULL

ACCESSION NUMBER: 2002:98948 USPATFULL

TITLE: Animal food and method

INVENTOR(S): Wilson, Mark E., Madison, WI, UNITED STATES  
Moser, Ronny L., Gridley, IL, UNITED STATES  
Orr, Donald E., JR., Noblesville, IN, UNITED STATES  
Hall, David D., Noblesville, IN, UNITED STATES  
Webel, Douglas M., Westfield, IN, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002051844	A1	20020502
APPLICATION INFO.:	US 2001-870899	A1	20010531 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-208616P	20000601 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BARNES & THORNBURG, 11 South Meridian Street, Indianapolis, IN, 46204	
NUMBER OF CLAIMS:	70	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	2 Drawing Page(s)	
LINE COUNT:	1147	



L3 ANSWER 2 OF 4 USPATFULL

ACCESSION NUMBER: 2003:105876 USPATFULL

TITLE: Animal food and method

INVENTOR(S): Wilson, Mark E., Madison, WI, UNITED STATES  
Moser, Ronny L., Gridley, IL, UNITED STATES  
Orr, Donald E., JR., Noblesville, IN, UNITED STATES  
Hall, David D., Noblesville, IN, UNITED STATES  
Webel, Douglas M., Westfield, IN, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003072787	A1	20030417
APPLICATION INFO.:	US 2002-142685	A1	20020510 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2001-870899, filed on 31 May 2001, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-208616P	20000601 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BARNES & THORNBURG, 11 South Meridian Street, Indianapolis, IN, 46204	
NUMBER OF CLAIMS:	70	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	2 Drawing Page(s)	
LINE COUNT:	1141	

L3 ANSWER 1 OF 4 PCTFULL COPYRIGHT 2003 Univentio  
ACCESSION NUMBER: 2001091575 PCTFULL ED 20020826  
TITLE (ENGLISH): ANIMAL FOOD AND METHOD  
TITLE (FRENCH): DENREE ALIMENTAIRE ANIMALE ET PROCEDE CORRESPONDANT  
INVENTOR(S): WILSON, Mark, E.;  
MOSER, Ronny, L.;  
ORR, Donald, E., Jr.;  
HALL, David, D.;  
WEBEL, Douglas, M.

PATENT ASSIGNEE(S): UNITED FEEDS, INC.  
DOCUMENT TYPE: Patent  
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2001091575	A1	20011206

DESIGNATED STATES  
W:

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR  
CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID  
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD  
MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL  
TJ TM TR TT TZ UA UG UZ VN YU ZA ZW GH GM KE LS MW MZ  
SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH  
CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ  
CF CG CI CM GA GN GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2001-US17663 A 20010531  
PRIORITY INFO.: US 2000-60/208,616 20000601  
ABEN . . . reproductive performance of breeding populat

=> d his

(FILE 'HOME' ENTERED AT 14:49:45 ON 28 MAY 2003)

FILE 'EUROPATFULL, PATDPAFULL, PCTFULL, RDISCLOSURE, USPATFULL, USPAT2, WPIDS' ENTERED AT 14:49:59 ON 28 MAY 2003

L1 348567 S FISH(3A)OIL OR SALMON OR MARINE OR EICOSAPENT?(W)ACID OR  
FATT  
L2 393 S L1(S)SWINE  
L3 4 S L1(S) (FEMALE(3A)SWINE)

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 15:02:39 ON 28 MAY 2003

L4 15 S L3  
L5 13 S L4 NOT PY>=2000

FILE 'CAPLUS' ENTERED AT 15:06:42 ON 28 MAY 2003

L6 3 S L3

FILE 'EUROPATFULL, PATDPAFULL, PCTFULL, RDISCLOSURE, USPATFULL, USPAT2, WPIDS' ENTERED AT 15:29:41 ON 28 MAY 2003

L7 348828 S FISH(3A)OIL OR SALMON OR MARINE OR EICOSAPENT?(W)ACID OR  
FATT  
L8 16 S L7(S) (FEMALE(3A) (SWINE OR PIG#))  
L9 2 S L8 NOT PY>=2000

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 15:34:09 ON 28 MAY 2003

L10 82 S L9

L10 ANSWER 6 OF 82

MEDLINE

ACCESSION NUMBER: 88334157 MEDLINE

DOCUMENT NUMBER: 88334157 PubMed ID: 3419285

TITLE: Trans fatty acids. 1. Growth, fertility, organ weights and nerve histology and conduction velocity in sows and offspring:

AUTHOR: Opstvedt J; Pettersen J; Mork S J

CORPORATE SOURCE: Norwegian Herring Oil and Meal Research Institute, Bergen.

SOURCE: LIPIDS, (1988 Jul) 23 (7) 713-9.  
Journal code: 0060450. ISSN: 0024-4201.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 198810

ENTRY DATE: Entered STN: 19900308

Last Updated on STN: 19900308

Entered Medline: 19881024

AB . . . the pre- and postnatal growth and development in pigs were studied with special emphasis on nervous tissue. In experiment 1, **female pigs** were fed partially hydrogenated **fish oil** (PHFO) (28% trans) or soybean oil (PHSBO) (36% trans), in comparison with lard (0% trans) from weaning (3 wk) through the first reproduction cycle (up to 2 yr). In experiment 2, **female pigs** were fed two **fish oils** (33 and 19% trans) in comparison with coconut oil (0% trans) in diets with low and high levels of linoleic. . . PHSBO in Expt. 1, but no similar effects were seen in Expt. 2. It is concluded that consumption of trans **fatty acids** with 18-22 carbon atoms from PHFO and with 18 carbon atoms from PHSBO at levels that were 5 to 12 times higher than those normally consumed by humans had no detrimental effects on **female pigs** or their offspring during pregnancy and lactation.

AB Effects of dietary trans fatty acids on the pre- and postnatal growth and development in pigs were studied with special emphasis on nervous tissue. In experiment 1, **female pigs** were fed partially hydrogenated **fish oil** (PHFO) (28% trans) or soybean oil (PHSBO) (36% trans), in comparison with lard (0% trans) from weaning (3 wk) through the first reproduction cycle (up to 2 yr). In experiment 2, **female pigs** were fed two **fish oils** (33 and 19% trans) in comparison with coconut oil (0% trans) in diets with low and high levels of linoleic acid (18:2n-6 cis, cis)

from gestation until their offspring were three wk old. Compared with the trans-free fats, the trans-containing fats had no effect on growth and development, feed consumption and utilization or on the weight of the brain, heart, kidneys, liver, lungs or spleen in the adult sows and their offspring. No effects from the experimental fats were found on histology and conduction velocity of the peroneal nerve. An increased number of

the sows fed PHFO had fertility problems compared with those fed lard and PHSBO in Expt. 1, but no similar effects were seen in Expt. 2. It is concluded that consumption of trans **fatty acids** with 18-22 carbon atoms from PHFO and with 18 carbon atoms from PHSBO at levels

that were 5 to 12 times higher than those normally consumed by humans had no detrimental effects on **female pigs** or their offspring during pregnancy and lactation.

=> d his

(FILE 'HOME' ENTERED AT 18:11:34 ON 12 APR 2002)

FILE 'USPATFULL' ENTERED AT 18:11:53 ON 12 APR 2002

L1 4933 S FISH(2A)OIL OR ((FATTY(W)ACID#) (3A) (3 OR 6)) (3A)OMEGA  
L2 12695 S LINOLENIC(A)ACID# OR LINOLEIC(A)ACID#  
L3 7 S (L1 OR L2) (L) (FEMALE(3A)SWINE)  
L4 1 S L3 NOT PY>=1999  
L5 1 S L3 NOT PY>=2000  
L6 63 S (L1 OR L2) (L) (FEMALE(5A)ANIMAL#)  
L7 31 S L6(L) (FERTIL? OR REPRODUCT? OR BIRTH#)  
L8 22 S L7 NOT PY>=1999  
L9 4626 S FISH(2A)OIL  
L10 14 S L9(L) (FEMALE(5A)ANIMAL#)  
L11 6 S L10 NOT PY>=1999  
L12 11026 S ((FATTY(W)ACID#) (3A) 6) (3A)OMEGA OR LINOLEIC(A)ACID#  
L13 728 S L12(L) (FERTIL? OR REPRODUCT? OR BIRTH#)  
L14 131 S L13(L) FEMALE  
L15 38 S L14 NOT PY>=1999